

Phileas

BY DEVEA

User manual



Made in France

We use ecofriendly disinfectants

PHILEAS

250

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Hello,
You have just acquired a
Phileas[®] 250 and we
thank you for it.

To ensure your
satisfaction, we invite
you to check :

Phileas²
BY DEVEA **2 key points**

1. Check your delivery

You have just unpacked your package containing :

- The Phileas[®] 250 with its covers
- One 5 L container
- One complete power supply that includes a cable with EU standards. Check if it conforms for your country otherwise, obtain a compatible cable.
- One document pouch containing :



1. User manual
2. Simplified manual
3. Guarantee certificate
4. Safety instructions and Precautions for use
5. Quality checklist
6. Return goods document
7. Declaration of Conformity
8. Brochure



Optional : Tablet with its power cable. MyPhileas[®] application is directly loaded. This application allows the remote piloting and guarantees the traceability of the realised disinfections.



This device is equipped with a gauge bridge (or balance) to regulate potential variations of the peristaltic pump. This gauge bridge and the pump are calibrated at the time of manufacture of the device. Make sure that the liquid container is placed in a stable position fully inside the rear bay in order to avoid any incorrect measurement of the diffused weight.

Advices to move Phileas[®] 250 :

- Before moving **Phileas[®] 250**, take the container off to avoid spillage of the liquid product, which could infiltrate the control part and damage the electronic board.
- Use the side handles to move **Phileas[®] 250** (you can push or pull it).
- Avoid impacts when moving the device (doorsteps, stairs, steps etc.) so as not to alter the calibration. Each time the device is moved, wait at least 2 minutes before switching it back on again so that all parameters stabilise.

Any change to the HMI board requires re-calibrating of the machine.

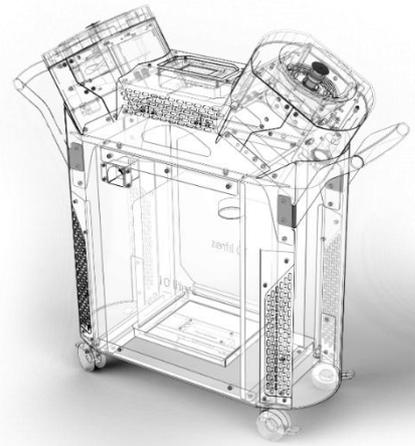
For any questions, contact your distributor. It will help you in starting and using **Phileas[®] 250**.

2. Test Phileas[®] 250

To check the operation of Phileas[®] 250, we recommend you to realize a water test :

1. Connect your unit to an electrical installation which complies with safety standards. The cable supplied is standard and meets EU, TUV, ANSI / AAMI CSA, UL and Denan (PSE) standards.
2. Fill the container with tap water.
3. Start Phileas[®] 250 
4. Follow the procedure outlined on page 14.

Phileas BY DEVEA **Summary**



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Preamble



Disinfection of Surfaces by Airborne Mist or DSAM is a means of disinfecting a space, or premises, by creating a dry fog that spreads in a confined space and ensures effective contact on surfaces.

This « terminal » disinfection comes in after cleaning of sensitive surfaces and in particular enables disinfection of areas normally deemed inaccessible (too high, shielded or even normally closed).

Note that this method is carried out with **non human presence (so without risk to the user)** and can be achieved in down time (no production time loss).

However, DSAM is not a method of disinfecting the air.

Guarantee

Parts of the machines in the Phileas[®] range are guaranteed 1 year.

The DSAM requires a machine / product combination. The efficiency of this process is verified using the French standard NFT 72 281. The DEVEA company ensures that the Phileas[®] process has been validated with O2SAFE 7.4[®] and PHILEASAFE[®] disinfectants. **You should therefore only use DEVEA disinfectants or those approved by DEVEA.**

O2SAFE 7.4[®] : Disinfectant made of 7,4 % hydrogen peroxide. *(ref p 35)*

APASAFE[®] and **PHILEASAFE[®]** : Disinfectants made of hydrogen peroxide and peracetic acid. *(ref p 35)*

Any change in disinfectant without prior agreement of the DEVEA company voids this validation and voids the unit manufacturer's warranty.

Similarly, you should not, in any circumstances, disassemble the unit without the prior agreement of the relevant maintenance service provider.

Do you want to use
your Phileas[®]250 for
the first time ?

Phileas⁷
BY DEVEA  **First time**

Do you need to prepare your room or your equipment ?

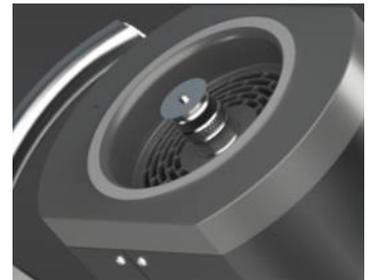
« We only disinfect what is clean ».

Simply clean the space or equipment to be disinfected and tidy as usual. You can leave your computers, equipments, documents, etc. in the room. They will remain functional and dry.
(Cf *Safety Instructions and Precautions for use*).

Is Phileas[®] 250 fragile ?

Phileas[®] 250 is a robust and accurate machine that has just one **point of vigilance : its spinning discs.**

They generate the formation of fine, dry fog ensuring perfect disinfection.
You should never touch them when they are spinning.



They must be protected by their cover when not in use and during the transport.

Any shock may cause deformation of the pin and damage to the motor bearings.



Phileas[®] 250 is also provided with a **balance** which allows to maintain a constant flow of the device and to verify the quantity of used product.

Think of removing the container during the transport to avoid that the weight of this one damages the balance.

Pay attention by crossing the doorsteps.

Phileas[®] 250 is cleaned using a cloth soaked in a detergent solution that is rubbed over the bodywork.

You must always fill the tank sufficiently because the bottom of the bottle is difficult to use.

How does your Phileas[®]250 work ?

The pump sucks the DEVEA liquid disinfectant from the tank and then feeds it to the disc through the pipes and stainless steel housing. The liquid diffuses on the bottom surface of the spinning disc and is dispersed into fine droplets. The air current created by the fan drives the droplets upwards and allows distribution throughout the space to be treated.



Install the plunger cap on the container of disinfectant DEVEA

Before any manipulation, protect yourselves eyes and hands with goggles and gloves.

- Open the disinfectant cap.
- Slide the 2 plunger hoses in the container and put the top part.
- Position **gently** and **correctly** the container on the support inside Phileas[®]250 : *you can not let it fall on the balance located under the container*
- Connect each pump hose to the cap :



To change the container :

- Disconnect the 2 pipes coming from the pumps
- Leave the cap on the liquid container
- Take out the liquid container
- Remove the cap and its two plunger pipes and position it on the new container
- Replace the new container on its base, level
- Reconnect the two pipes to the liquid container cap.

This precaution will avoid piercing the pipes or disconnecting them from the pumps.

Where should you place Phileas[®]250 for maximum efficiency ?

The place of Phileas[®]250 in the room to be treated must be studied with your distributor.

This one is available to confirm the disinfection protocols you may require to achieve your desired results. Remember to seek his advice.

Do you want to
program your
Phileas®250 ?

Phileas BY DEVEA  Using

Programming

What are the diffusion limits of Phileas[®] 250 ?

Diffusion time is limited by the rate of the pump and the volume of the container :

Phileas [®] 250	
Maximum number of cycles	5
Maximal time of diffusion with a 10 L container	3h17



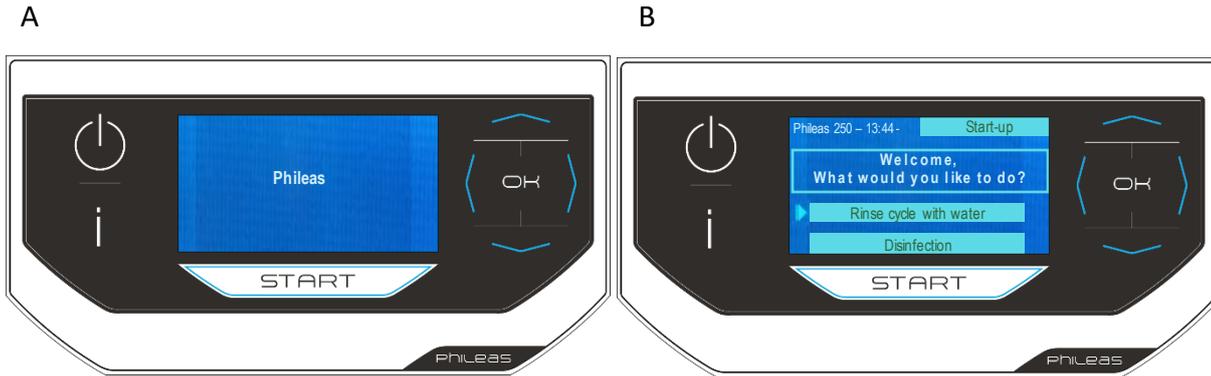
These 2 limits condition totally your diffusion parameters.

By the way, if you exceed these maxima, **Phileas[®]250 will refuse the validation and ask you to come back and modify your parameters** (in particular the number of cycles).

Check out the home screen

Start Phileas®250

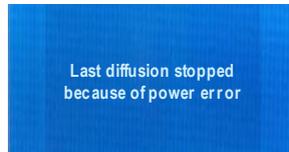
The home screen occupies 2 screens :



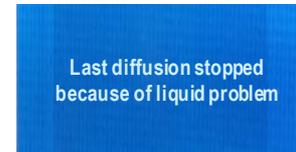
You may see the following screens :



Press  to get back to screen B.

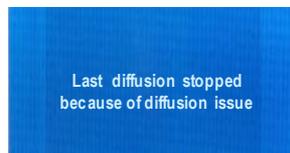
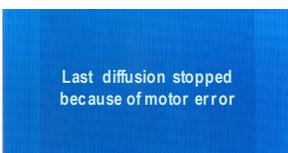


This message indicates that a power failure occurred. Press  to get back to screen B and begin again the programming.

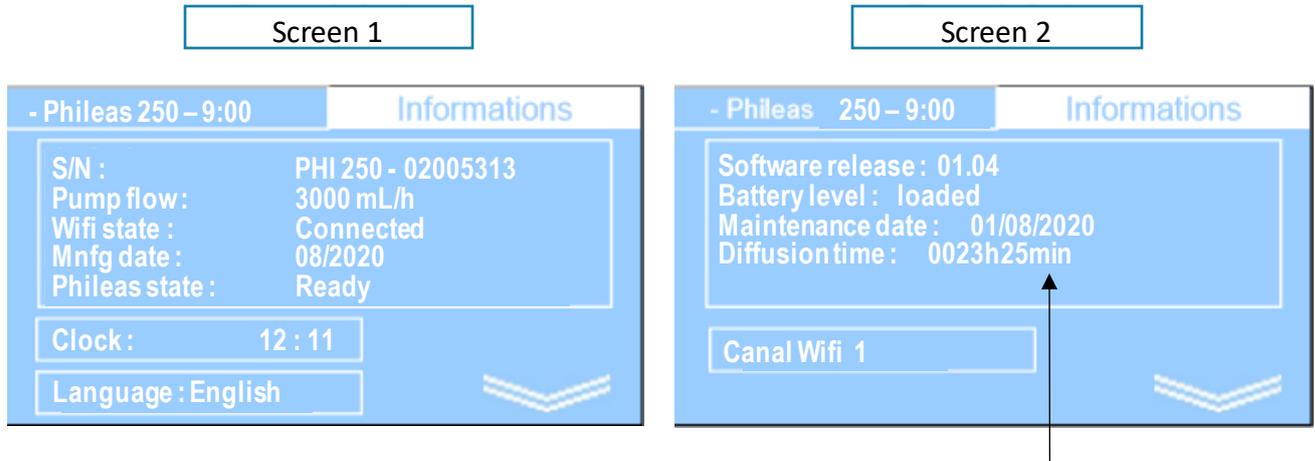


This message indicates the disinfectant tank emptied itself during the last diffusion. Fill it again, press  to get back to screen B and begin again the programming.

If you see these messages below, contact your distributor :



To access functionalities of the  key, select Disinfection and then press  .



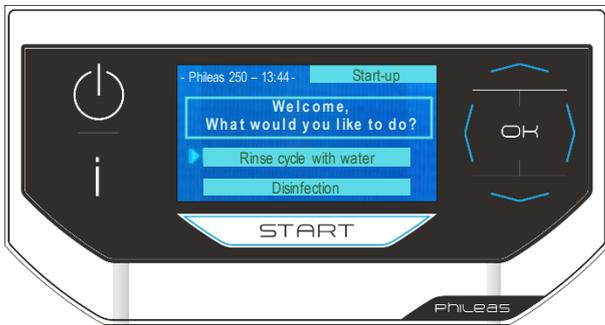
Please note that diffusion time information is the total time of diffusion after the 1st use of Phileas®250.

Canal Wifi 1 : When you want to remotely pilot your disinfection programs with MyPhyleas application, your device is connecting automatically with the tablet.

To modify the Wifi channel of your device : use the  arrow to access to the choice of the channel's number, then click on  and select a channel between 1 and 10 with the  arrow (for information, channels 11-12-13 are dedicated to other connections for the maintenance).

1st case : You want to perform a rinse cycle with water

As soon as you turn the device on, the option Rinse cycle with water displays on home screen. Once achieved, the option disappears. To make again the test, switch off the device then turn it on.



Here you are in **START** mode (top right of the screen). The cursor is directly placed on **Rinse cycle with water**.

Check the container is full of water.

Press **ok**.

The test takes about 2 minutes.



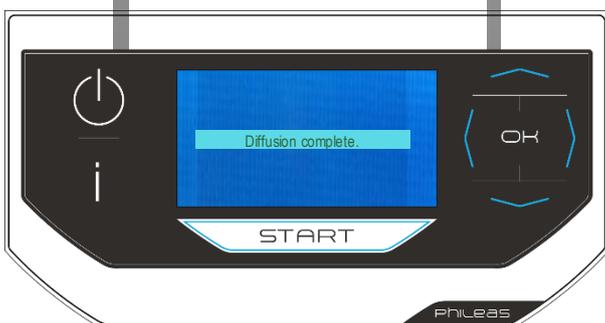
Press **ok** to confirm diffusion.



During a rinse cycle performed after diffusion with disinfectant, it is recommended not to stay in a stuffy place or too close to the device.

In the case of a water test, you can stay close to the device without touching the disc. Rinsing starts within 1 minute.

To cancel the procedure, press **ok** to stop the cycle :



When the program is completed, the **Diffusion complete** message appears.

The unit has completed treatment and is emptied automatically.

You are on main screen : the last realized program of diffusion is displayed.

2nd case : You want to use a recorded program (1/2)



You are on the home screen in START mode.

Select DISINFECTION by pressing the down arrow



then click **ok**.



You move to the home screen in PROCESS mode.

It presents the parameters of the last diffusion program used.

Here, the diffusion for a zone of 150 m³, disinfected at a rate of 8 ml/m³ for a total time of 50 min. This period includes 2 cycles and the delay time which occurs between each cycle is 2 times in this example.

If this program is appropriate for you, press **START**.



Searching for another preset program ?

Scroll down to ZONE with the down arrow



Press **ok** to access the various existing programmed diffusion zones.



Move sideways to the right by using the right arrow until reaching the desired zone.



In the example, the cursor points to ZONE 2 whose diffusion parameters are :

- Volume of 100 m³
- Disinfectant dose of 12 ml/m³
- Diffusion program in 3 cycles
- Total diffusion duration of 1h18 min
- Delay time of 2 min

Is this zone right for you? Press **START** to validate the diffusion program.



2nd case : You want to use a recorded program (2/2)



For safety, you must confirm diffusion by pressing **ok**.

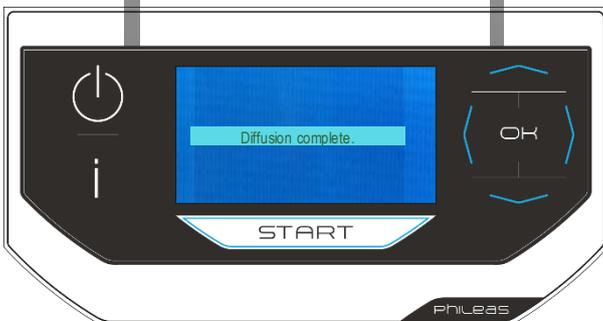


The selected program has a time delay of 1 min, so you have this time to stop the equipment or leave the airlock.

Check the container is full of DEVEA disinfectant.

To cancel the programming, press **ok**.

The following screen appears:

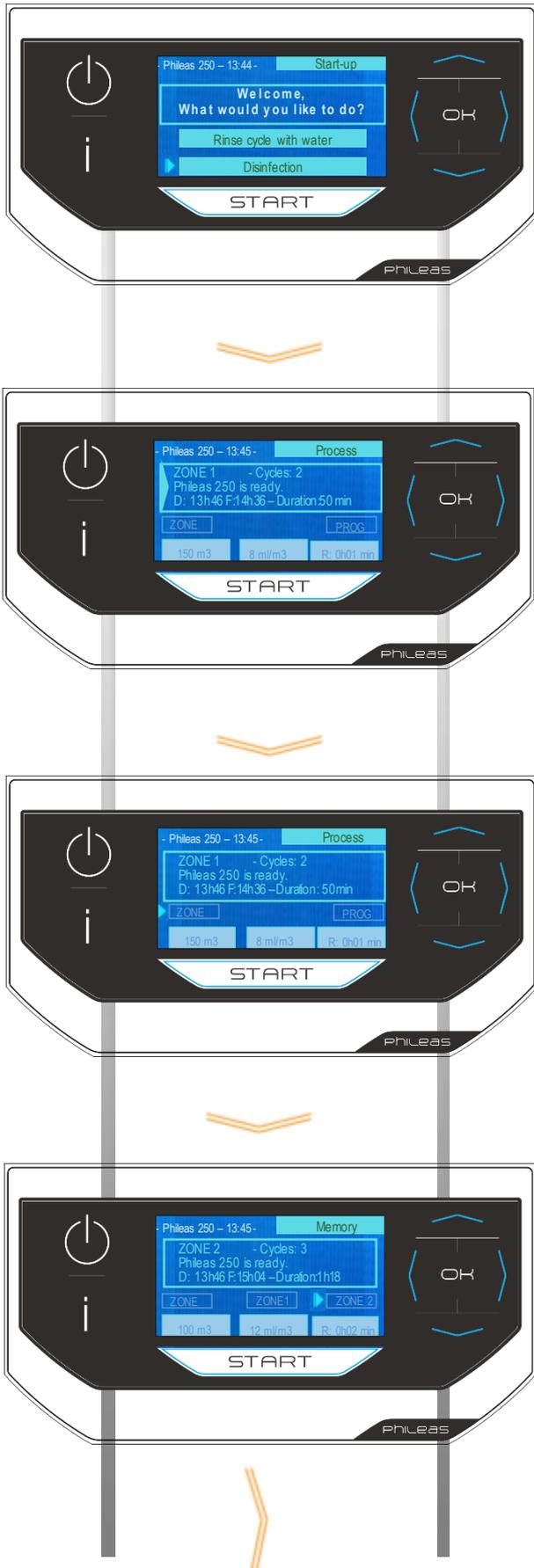


When the program is completed, the **Diffusion complete** message appears.

The unit has completed treatment and is emptied automatically.

3rd case : You want to change a recorded program (1/3)

You can modify a recorded program but you can not delete it.



You are on the home screen in START mode.

Select DISINFECTION by pressing the down arrow

then click .

You move to the home screen in PROCESS mode.

It presents the parameters of the last diffusion program used.

Scroll down to ZONE with the arrow .

Press to access the various programmed diffusion zones and move sideways to the right using the right arrow until reaching the zone to change.

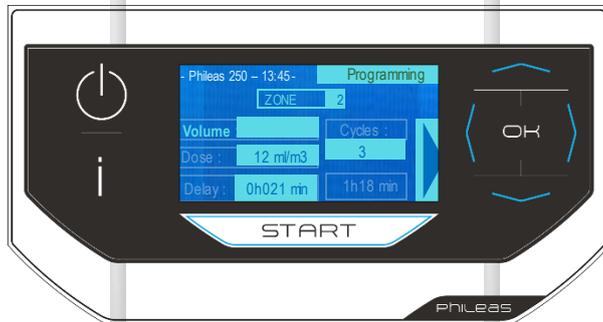
In the example, the cursor points to **ZONE 2** whose diffusion parameters are displayed:

- Volume of 100 m³
- Disinfectant dose of 12 ml/m³
- Diffusion program in 3 cycles
- Total diffusion duration of 1h18
- Delay time of 2 min

Do you want to change the program of Zone 2 ?

Press twice.

3rd case : You want to change a recorded program (2/3)



You move to PROGRAMMING mode.

The programming parameters of Zone 2 appear.

The cursor flashes on the zone number.

Press **ok** .

For each parameter to be entered:

- You position yourself using the down arrow **ok** .
- Press  : the box is highlighted
- You enter the data using the  and  arrows.
- You confirm the information with **ok** and move to the next parameter.

If parameters exceed the limits of diffusion (see p 12), review your programming.

In the example, you enter a new zone volume to be disinfected.

Move from parameter to parameter with the  arrow.

When finished, your cursor is on the right arrow on the screen .

You will notice that by changing the settings, the diffusion time is recalculated automatically.

When you program several cycles, a minimal and systematical delay time of 1 minute is planned between each cycle and before the starting up.

Press **ok** to accept your changes.

You are offered 3 choices.

➔START WITHOUT SAVING : by pressing **ok** the unit invites you to leave the room and start diffusion.

➔SAVE : by pressing **ok**, the following summary screen appears (continued on page 19).

3rd case : You want to change a recorded program (3/3)



Summary screen of your change.

Press **START** to activate the program and press **OK**.



The selected program has a time delay of 1 min, so you have this time to leave locked room.

Check the container is full of DEVEA disinfectant.

To cancel this programming, press **OK**.

The following screen appears :



When the program is completed, the **Diffusion complete** message appears.

The unit has completed treatment and is emptied automatically.

4th case : You want to create a new ZONE program (1/3)

You can create or modify a program but you can not delete it.



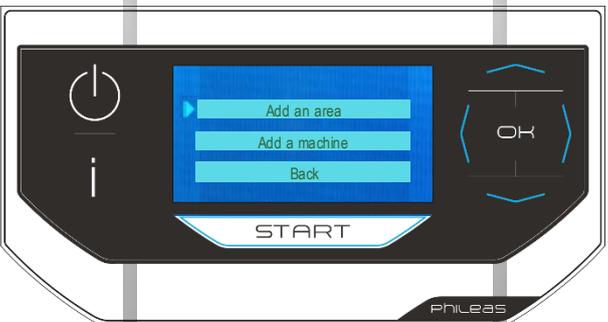
You are on the home screen in START mode.

Select DISINFECTION by pressing the down arrow  then click .



You move to the home screen in PROCESS mode.

Place yourself on PROG with the right arrow  then click .



Select ADD AN AREA and press .

You move to PROGRAMMING mode.

Now enter the desired diffusion parameters one after the other.

For each parameter :

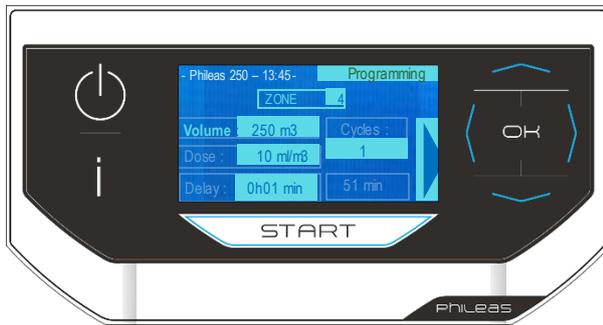
- Place the cursor using the down arrow 
- Press  : the box is highlighted
- Enter the data using the  and  arrows.
- Confirm the information with  and move to the next parameter.



Start with the number of the zone ... (highlighted here).

Nota : When you program several cycles, a minimal and systematic delay time of 1 minute is planned between each cycle and before the starting up.

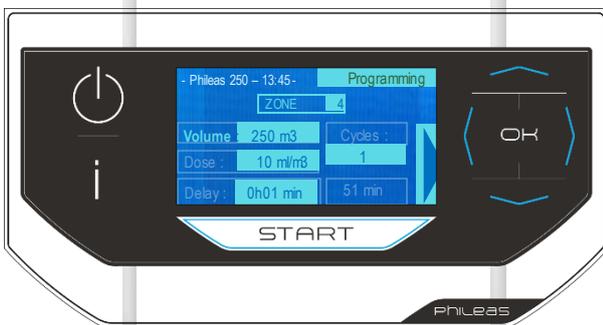
4th case : You want to create a new ZONE program (2/3)



Go to volume...

You continue with DOSE, DELAY time and the number of CYCLES. The total diffusion time is calculated automatically.

If parameters exceed the limits of diffusion (see p 12), review your programmation.



When finished, your cursor is on the right arrow on the screen .

Confirm the creation of Zone 4 by pressing .



You are offered 3 choices.

→ **START WITHOUT SAVING** : by pressing  the unit invites you to leave the room and start diffusion.

→ **SAVE** : by pressing , the following summary screen appears :



Press  to activate the program.

4th case : You want to create a new ZONE program (3/3)



For safety, you must confirm diffusion by pressing **ok**.



The selected program has a time delay of 1 min, so you have this time to leave locked room.

Check the container is full of DEVEA disinfectant.

To cancel programming, press **ok**.

The following screen appears :

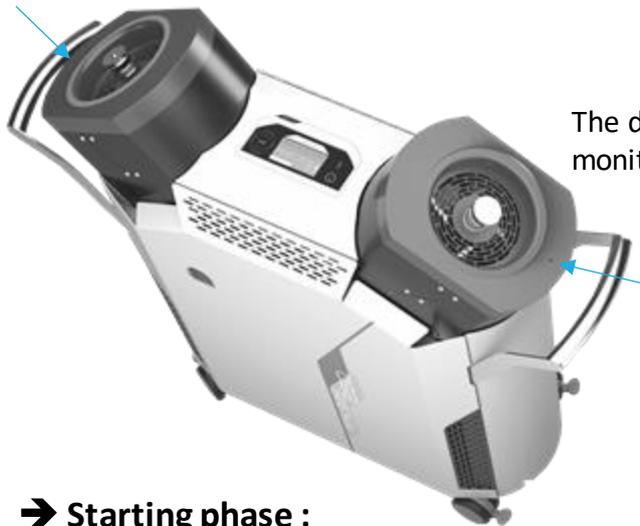


When the program is completed, the Diffusion complete message appears.

The unit has completed treatment and is emptied automatically.



Operating check by LED



The diffuser has a LED display on the top, enabling you to monitor what stage it is at from a distance.

→ Starting phase :



The LED flashes **GREEN slowly** : programming is underway but without diffusion (initial delay time phase)

→ Diffusion phase :



The LED lights in **GREEN without flashing** : diffusion is on the way.

→ End of diffusion :



The LED flashes **GREEN quickly** : the program is completed and diffusion was achieved without a hitch. The digital display shows the message « Diffusion complete ».

→ Reporting a problem on one or both heads diffusion



The LED flashes in **RED** : the diffusion is not realised correctly.



Press  to move to home screen. LED still flashes **red**.

Start a new program to check if the detected problem persists :

→ LED lights in **green**

There are 2 situations :

- no more problem (eg : you have refilled the can), LED stays **green**
- the detected problem persists : LED **flashes red**



The LED is **RED without flashing** : there is a communication problem between the tablet and the device.

Unplug/plug **Phileas®250** and start again the program.

When can you enter an airlock that is being treated ?

The usual contact time is about 2 hours.

After this time, we recommend that you ventilate the treated area for 30 to 60 minutes depending on the speed of air renewal in your installation. A renewal of 20 volumes of fresh air is necessary. If the treated zone is not ventilated, wait a night before entering.

How to maintain your

Phileas[®]250 ?

Phileas[®]
BY DEVEA  **Maintaining**

How to clean your Phileas[®] 250 ?

The bodywork of the unit must be cleaned regularly by simply using a cloth soaked in a detergent solution.

Do you want to store your Phileas[®]

250 for future use ?

Only one precaution is necessary ...

Make sure you rinse the machine's liquid circuit with tap water after the last use before storage.

When in doubt, you can do the following :

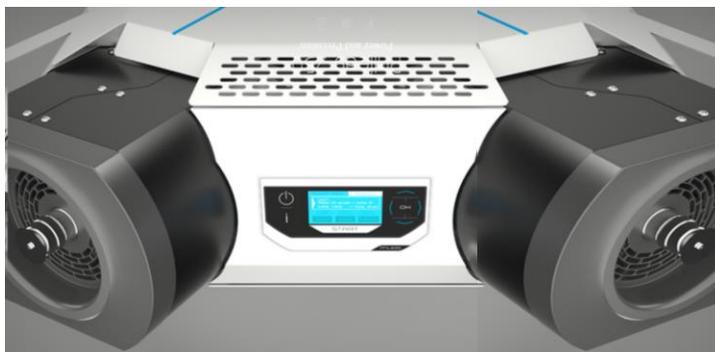
- Fill your container with water.
- Check the correct positioning of the suction tube.
- Start the machine and choose the **Rinse cycle with water**. You can stay in the room during the water test. *If the device is already switched on, you must switch off then turn it on to access the menu **Rinse cycle with water**.*

Note : the rinsing procedure is described in detail on page 14.

Phileas BY DEVEA  **Glossary**

Codes

Glossary of different Phileas[®] 250 messages and codes



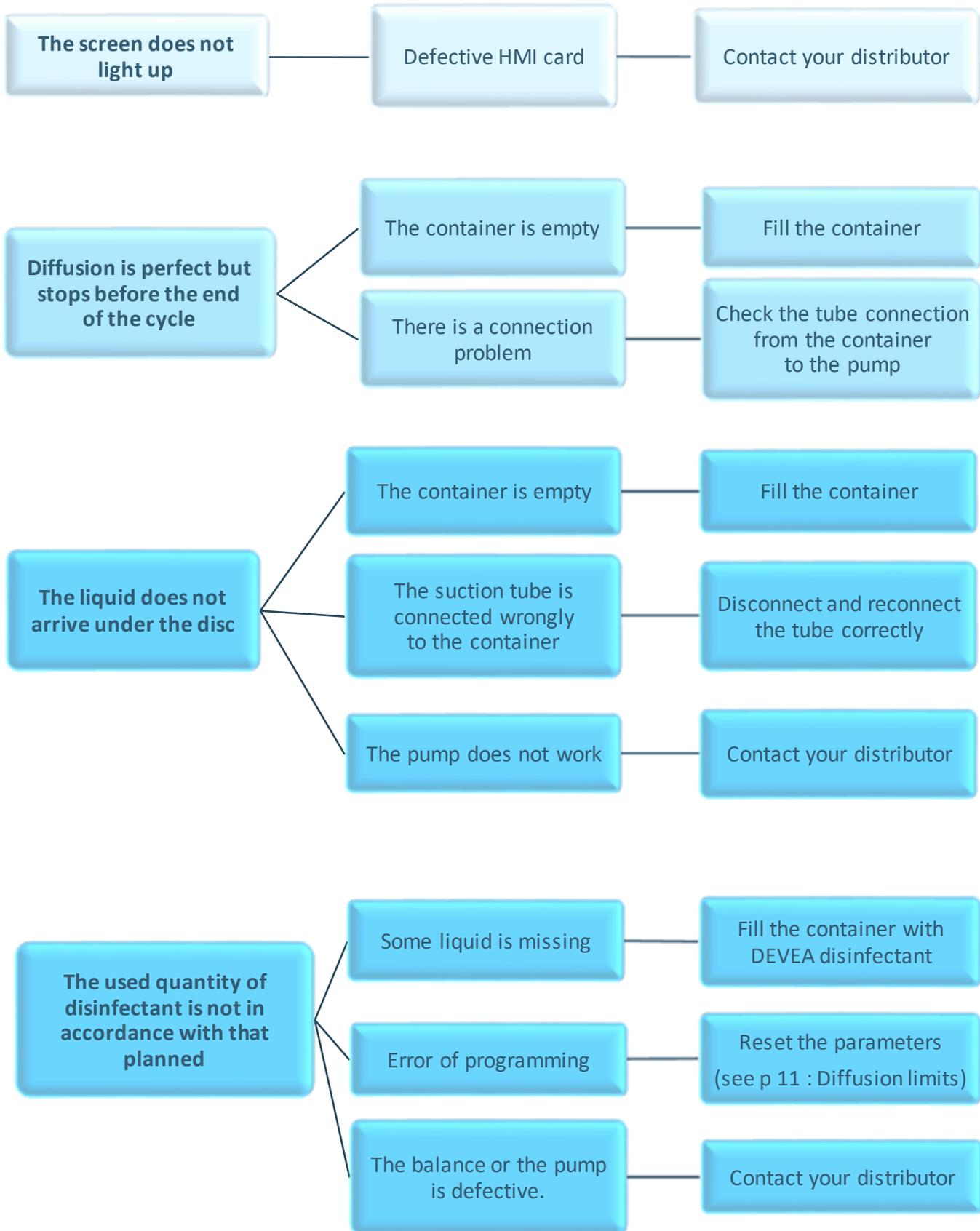
Diffusion head n° 1
(left of the screen)

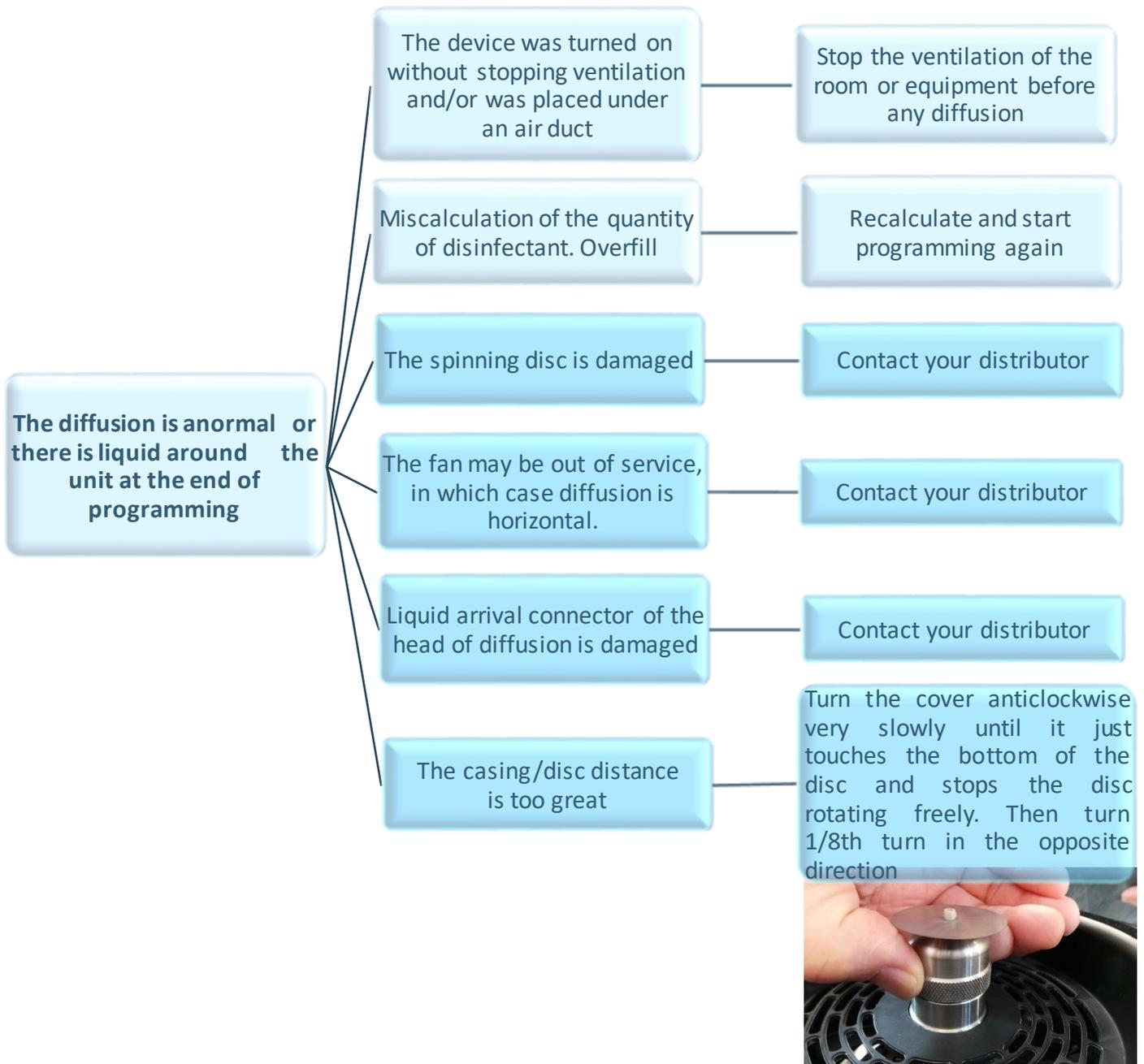
Diffusion head n° 2
(right of the screen)

Messages/Codes	Meaning
Liquid inlet error No1 ! Liquid inlet error No2 !	The liquid does not arrive under the disc of head diffusion 1 The liquid does not arrive under the disc of head diffusion 2
ERROR : Memory corrupted!	Communication problem between defective motor and control circuit board
ERROR : Module communication is missing!	Problem on control circuit board
ERROR : Module is on stand by!	Problem on control circuit board or on HMI card
ERROR : Disc Motor No1! ERROR : Disc Motor No2!	Problem on disc motor of the diffusion head 1 Problem on disc motor of the diffusion head 2
ERROR : Fan No1! ERROR : Fan No1!	Problem on the fan of the diffusion head 1 Problem on the fan of the diffusion head 2
ERROR : No balance available !	Problem on the balance.
Not enough liquid	The bottle is empty or not enough filled. Fill it.
ERROR : Alimentation !	A power failure occurred during the diffusion or there is a power issue (the green led of the transformer is off or flickers).

How do you fix
common malfunctions ?

Phileas BY DEVEA  **Fixing**





For any other situation, contact your distributor. If you have to return Phileas® 250 to your distributor, protect it with the original packaging or use a suitable packaging.

Send the following elements:

- the unit **with its covers**
- power supply

The diffusion heads must be protected. To do this, reuse the original packaging or, if not, use suitable packaging.

Changing the rotating disc : 1/2

 <p>Estimated response time : 5 minutes</p>	 <p>Difficulty level : easy and delicate</p>
 <p>Install your Phileas® on a stable flat surface.</p> <p>The device is unplugged and the bottle removed.</p>	 <p>2 tools required :</p> <ul style="list-style-type: none"> - Screwdriver DEVEA (ref : AR00780) - Spanner DEVEA (ref : AR00275)

Remove the protective cover from the diffusion head.

Use the spanner to hold the nut fastened around the disc shaft. Place the screwdriver on the head of the shaft and turn it *clockwise* to unscrew the nut. Position the screw in the cover.



Carrefully remove the disc.

Take the new stainless steel disc and slide it along the axis of rotation.
(The two sides of the disc are identical.)



With your fingertips, push down to the last edge at the bottom of the thread.

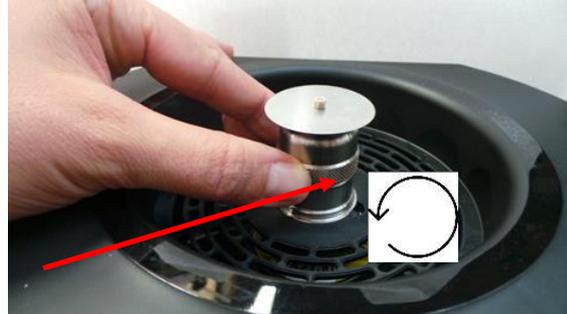
Position the nut and tighten with spanner and the screwdriver turning them *anticlockwise*.

The screw is self-fastening, there is no need to tighten it too hard.
Gently rotate the disc with a finger.



Changing the rotating disc : 2/2

Turn the cover *anticlockwise* very slowly until it just touches the bottom of the disc and stops the disc rotating freely.



Then, turn the cover 1/8 turn in the opposite direction and then run a rinse cycle to check the adjustment is correct and fog is correctly produced.



Try this new disc :

- Fill the container with tap water and install it
- Switch Phileas® on and run a water test to confirm the formation of fog.

Phileas BY DEVEA **References**

Consumables

References	Description
O2S 7,4 10	10 L can of O2SAFE 7.4+ [®] Liquid disinfectant composed of 7,4% hydrogen peroxide
PHISAF 10	10 L can of PHILEASAFE [®] Liquid disinfectant composed of 7,3% hydrogen peroxide and 0,15% peracetic acid
PHISAF 6	6 x 1 L bottles of PHILEASAFE [®] Liquid disinfectant composed of 7,3% hydrogen peroxide and 0,15% peracetic acid

Technical specificities of the device

Characteristics :

LCD screen
 Robust ergonomic handles and wheels
 Programming number of cycles, delay time and volume of diffusion.
 Automatic calculation of diffusion time
 Number of head diffusion : 2
 Sense of disc's rotation : anticlockwise
 Liquid missing security

Maximal volume of treatment : 600 m³
 Flow rate : 3000 ml/h
 Granulometry : 5 -> 10 microns
 Container : 5 L or 10 L
 Materials compatibles with H₂O₂
 Dimensions (L x l x h) : 825 x 250 x 812 mm
 Weight : 25 Kg
 Power : 90 W

Risks associated with the use :

Our devices have to be used with non human presence because they diffuse hydrogen peroxyde during the operation. In the water test, the user does not have to touch the rotating (risk of accidental cut).

Here is the risk analysis user :

Assessment of the risk						Risk management						
Dangerous phenomenon	Cause, origin	Associated risks	S	P	R	Means to control	S	P	R	Audit of efficiency	Establishment	Induced hazards
1. Rotating disc	Technology of diffusion	Cut finger	4	1	1	Comply with any prescribed security measures	4	1	1	Programming the device with a delay time	Training	No
2. Filling the container	Transfer disinfectant from container to the tank	Spatters in eyes and on hands	3	2	2	Use equipments of individual protections (gloves and goggles, use a Major pump)	3	1	1	Purchase of the pump	Technical notice	no

S : indicates the Seriousness

P : indicates the Probability

R : indicates the category of the Risk

Probability	Cotation	Seriousness	Cotation
Frequent	5	Catastrophic	4
Probable	4	Serious	3
Possible	3	Middle	2
Rare	2	Minor	1
Improbable	1		

The device has to be exclusively used inside closed areas (animal facilities, laboratories...) or placed into equipments like microbiological safety cabinets...

In addition, it has to be exclusively used with DEVEA disinfectants or those approved by DEVEA. The manufacturer DEVEA SAS assumes no liability if the user :

- Uses other products than those recommended. They could damage the device or threaten the safety of the user or be harmful for the alive and non-alive environment.
- Uses the device in other situations than those described above. Any exceptional use has to be controlled and validated or not by DEVEA SAS.

Technical specificities of the device

Conformity :

Any change in equipment on the initiative of the distributor or the user (that might affect security conditions) causes the cancellation of the statement of conformity CE completed by the manufacturer and disclaims all liability. This is also true for the change of an original part by a non-original one.

Nota : The manufacturer or its representative are the only ones authorized to examine or deliver the diffusion head.

Technical date of Power supply :



Extern power supply class II

Power connection directly in the socket of the device.

To disconnect the device : unplug the power supply.